TUDOLINK WHITEPAPER

A blockchain-based platform for sharing computing resources & data

CHIWEN B.V.

V1.0.1827

27.08.2018

CONTENTS

SUMMARY

PROBLEM

With the current trend of sharing economy, sharing is no longer limited to leasing cars and spare rooms. Emerging technological developments make it possible to share computing resources from smart TV Box, Wifi Box, smartphones and computers and so on.

Most of people do not use their TV Box and Wifi Box during the day time. 85% of people normally do not power off their computers when they are off duty. Statistics also prove that 98% of people only utilize 5% to 20% of the computing power of their smart devices. This then leads to wastage of power and computing resources. To add to this, researchers and developers (R&Ders) spend massively when buying computing resources and data whereas young researches and students cannot meet the budget. However, the new technology ensures that the computing power and computing resources are not only utilized but also used to earn income.

Current Situation	Cost
Buy or build a computer cluster	$ 5,000,000
Purchase super computers	$ 50,000 / Each
Subscribe solutions provided by large enterprises (Google, Amazon, IBM etc.)	$ 0.32 - 0.54 / Hour
Use facilities from universities or companies	Limited resources
Cooperate with other companies on big projects	Chance barely existing

SOLUTION

TuDoLink, a secure, transparent and decentralized online platform where users can share, lease, rent and auction idle computing resources and their data, is the solution.

Machine learning algorithms are used to build safety mechanisms and to analyze codes of programs on TuDoLink so as to ensure that only highly safe level programs could be submitted to the platform.

Unlike other similar projects, we use in-browser implementation technology. Users are able to share computing resources on TuDoLink by just one click of a button on the browser. There is no need for additional hardware or software. People who have limited computing resources will be able to enjoy massive opportunities using TuDoLink. Moreover, R&Ders and suppliers could have free communication and also an advantage of following any projects on the platform.

Each transaction, codes of task or fragment of data will be stored immutably in the blockchain. TuDoLink also offers insurance called the “program guarantee” which covers any potential property damage caused by the use of programs on its site. Needless to say, TuDoLink is for every smart technology user. It is set to be one of the best products in this era of blockchain technology, sharing economy and computer intelligence.

BUSINESS MODEL

- Provide technical services and charge service fee.
- Sale our crypto currency and make it more and more valuable.
- Other business models could be developed in the future.

1. WHAT IS TUDOLINK?

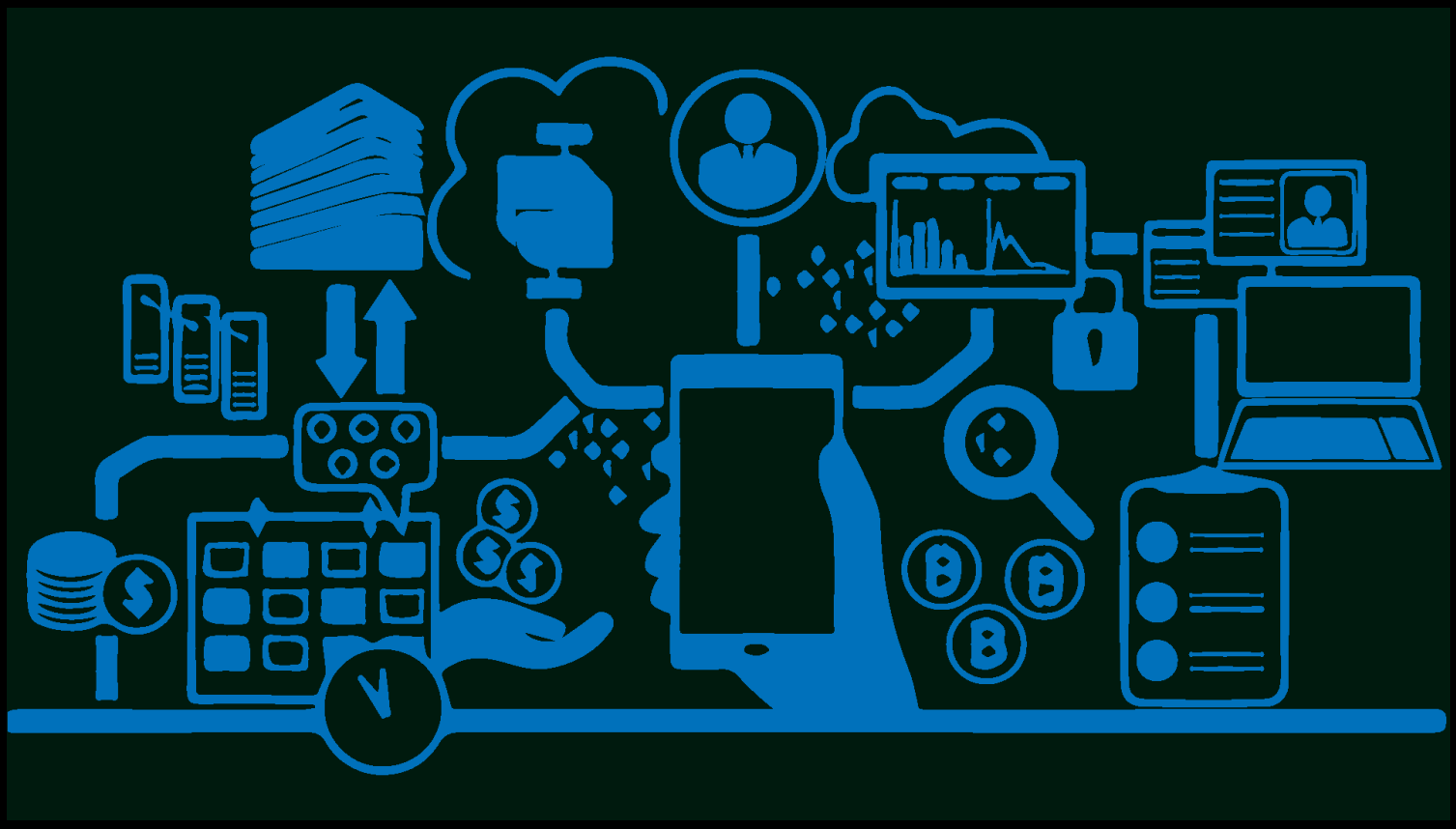
1.1 A SHARING AND TRADING PLATFORM

TuDoLink is a secure, transparent and decentralized platform where users can share, rent, lease and auction idle computing resources and their data from their TV Box, Wifi Box, play station, smartphones and computers. Researchers and developers will be able to save money when using computing power and running experiments; Providers make money when sharing idle computing power or data.

1.2 A FUTURE INVESTMENT PLATFORM

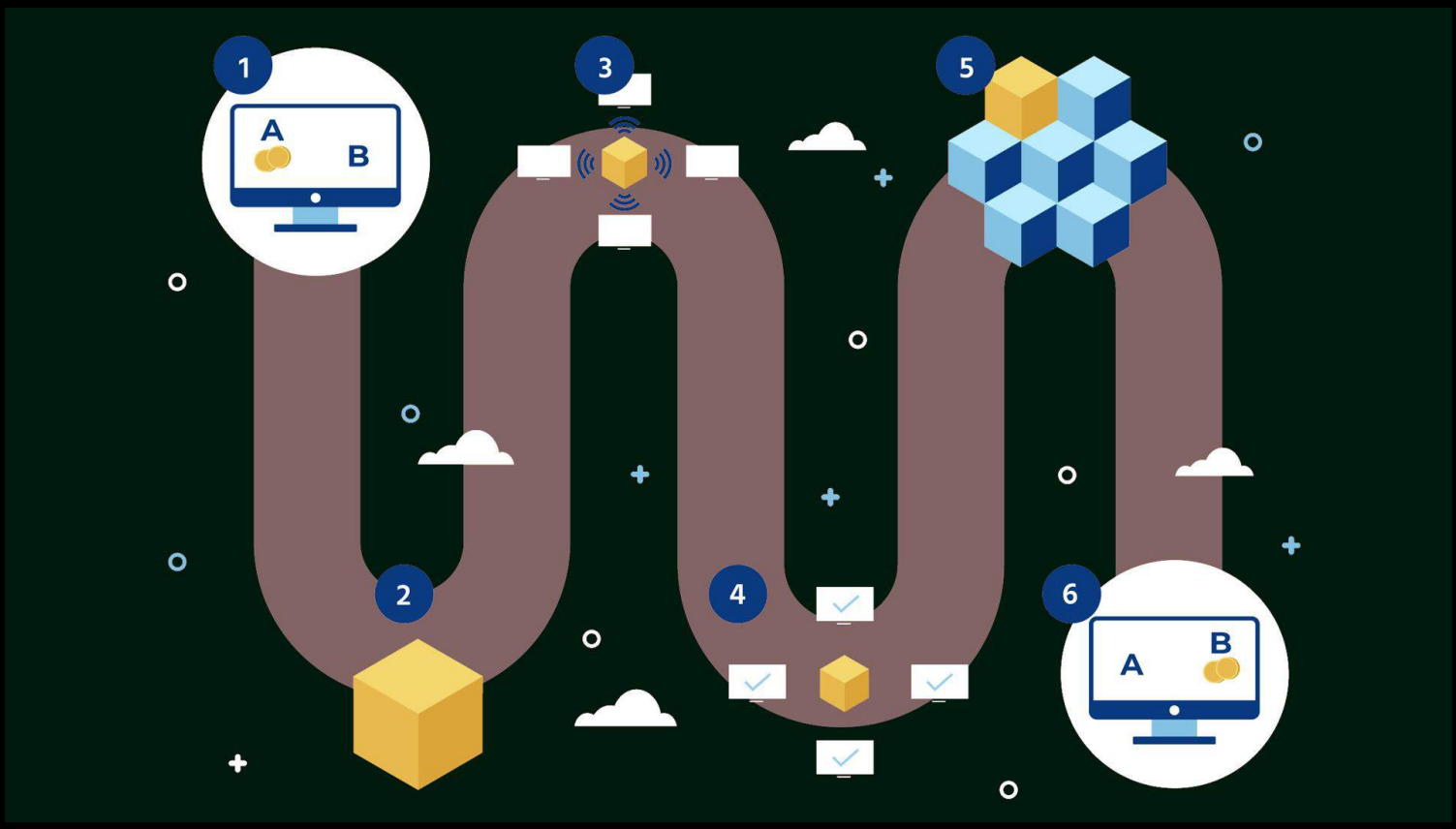
Trading on TuDoLink, all parties will directly or indirectly contribute to the R&D. This is because our initial buyers will be predominantly scientists, researchers, students, medical doctors to name just a few.

1.3 A SUPER NETWORKING COMPUTER



By using the TuDoLink platform, users could build a distributed network computing system which could contain thousands of CPUs and GPUs. The system could be used for your projects, researches, experiments, programs, and so on.

1.4 A BLOCKCHAIN



Each transaction, code of tasks and fragment of data will be based on a smart contract and stored immutably in the blockchain with a digital signature of the buyer and supplier. Suppliers can take tasks and trace codes of tasks whenever they want. Suppliers can also share and sell their data on the blockchain.

1.5 MINIMUM VIABLE PRODUCT

Please check our website and GitHub for our minimum viable product.

2. BUSINESS MODEL

2.1 PROFIT MODEL

Just like Airbnb offers accommodation in private houses and Uber offers rides in private cars, we at TuDoLink offer computing resources in private TV box, Wifi Box, smartphones, computers, and other devices. For every completed deal on the platform, we provide technical services and charge a set of service fee. This fee powers the project's operation and enables the provided platform. It allows us to offer great customer support all through the transaction process.

We also provide technical service for organizations that have enough idle computers themselves and have not been utilizing this such as in hospitals and universities. We can help build a distributed computing system by using their idle computers which leverages income by using our platform sources. An example is the University of Groningen. It has more than 5000 computers which are not used at least in the evening. We could help them build a new computing cluster using these computers cheaply and efficiently

Other business models could be developed in the future.

2.2 TRADING MODEL

R&Ders submit codes of tasks or data requirements together with token rewards to smart contracts. The suppliers earn by tokens by finishing tasks or submitting data.

One obvious example will be, if R&Ders need to process big data for cancer research, instead of paying for expensive cloud services or supercomputers, they can simply log onto TuDoLink to buy abundant cheap or free computing power. As for the providers, they are aware that they are helping to advance free cancer treatment research and could get tokens by completing tasks. They could also use tokens to get a cancer check or health tips from researchers.

3. ADVANTAGES

We are aware of our competitors with similar projects but we stand out because of these: easiness, transparency, sociability and secureness. This form shows our competitors and comparison.

	TuDoLink	Gridcoin	Golem	Sonm
Computing power shared	√	√	√	√
Open to individual suppliers	√	√	√	√
Open to individual R&Ders	√	×	√	√
Tasks distribution	√	√	√	√
Easy: In-browser implementation	√	×	×	×
Transparency: Tasks traceable on blockchain	√	×	×	×
Social: Free communication between R&Ders and suppliers	√	×	×	×
Secure: Program Guarantee	√	×	×	×
Codes inspection	√	×	×	×
Technical support and consulting	√	×	×	×
Cloud services	√	×	×	×
Data Trading	√	×	×	×

3.1 EASY

TuDoLink is an easy platform to use. TuDoLink uses in-browser implementation technology and it does not need complicated techniques in order to enjoy its services. Users can share computing resources on TuDoLink by just 1 click of a button on the browser, no need for any additional hardware or software. As a matter of fact, TuDoLink is for any internet user interested in sharing computing resources.

3.2 TRANSPARENCY

Since programs on TuDoLink are open source, all program codes and transaction information are visible in the public blockchain. Suppliers and users will be able to verify them at any time.

3.3 SOCIAL

Users at TuDoLink can engage on the platform. Suppliers and sharers will be able to communicate and share information on our platform in order to come to an agreeable deal. Users could also follow progresses of any project on TuDoLink.

3.4. SECURE

Apart from offering program guarantee to users in our platform, security at TuDoLink is a priority. All programs on our platform are safe. Machine learning algorithms are used to ensure that no unsafe programs reach the platform. No task could access your smart device without your permission.

4. TOKENS

4.1 TUDOLINK TOKEN (TDL)

TuDoLink will generate and support a token named TDL (TuDoLink Token). It will be used in the sharing and trading platform of idle computing resources and data. TDL will enable transactions as suppliers will receive an incentive and those who use the shared computer resources will pay using TDL. TDL permits users to trade in the digital market or other markets outside of TuDoLink platform.

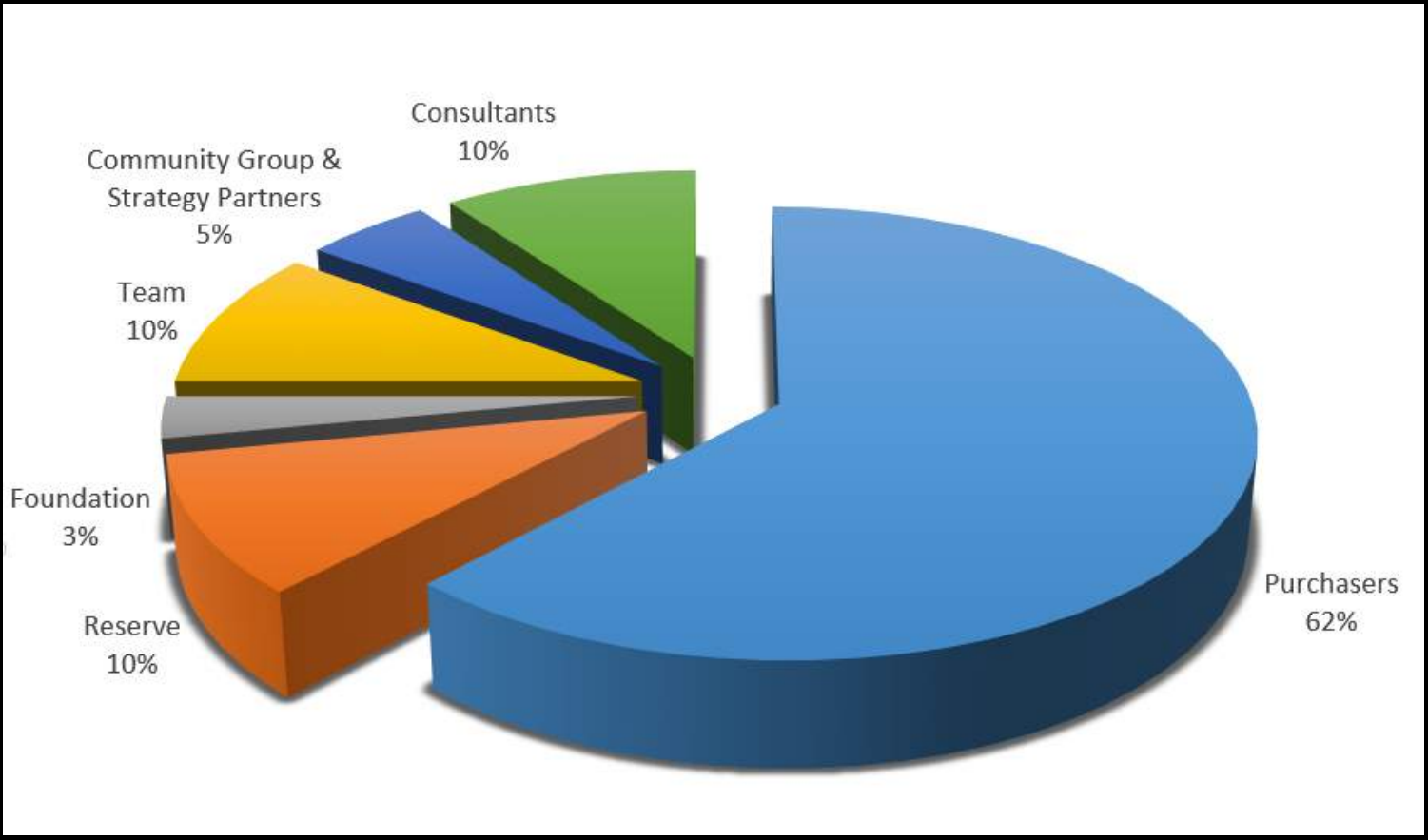
4.2 INITIAL COIN OFFERING (ICO)

Here is our ICO plan:

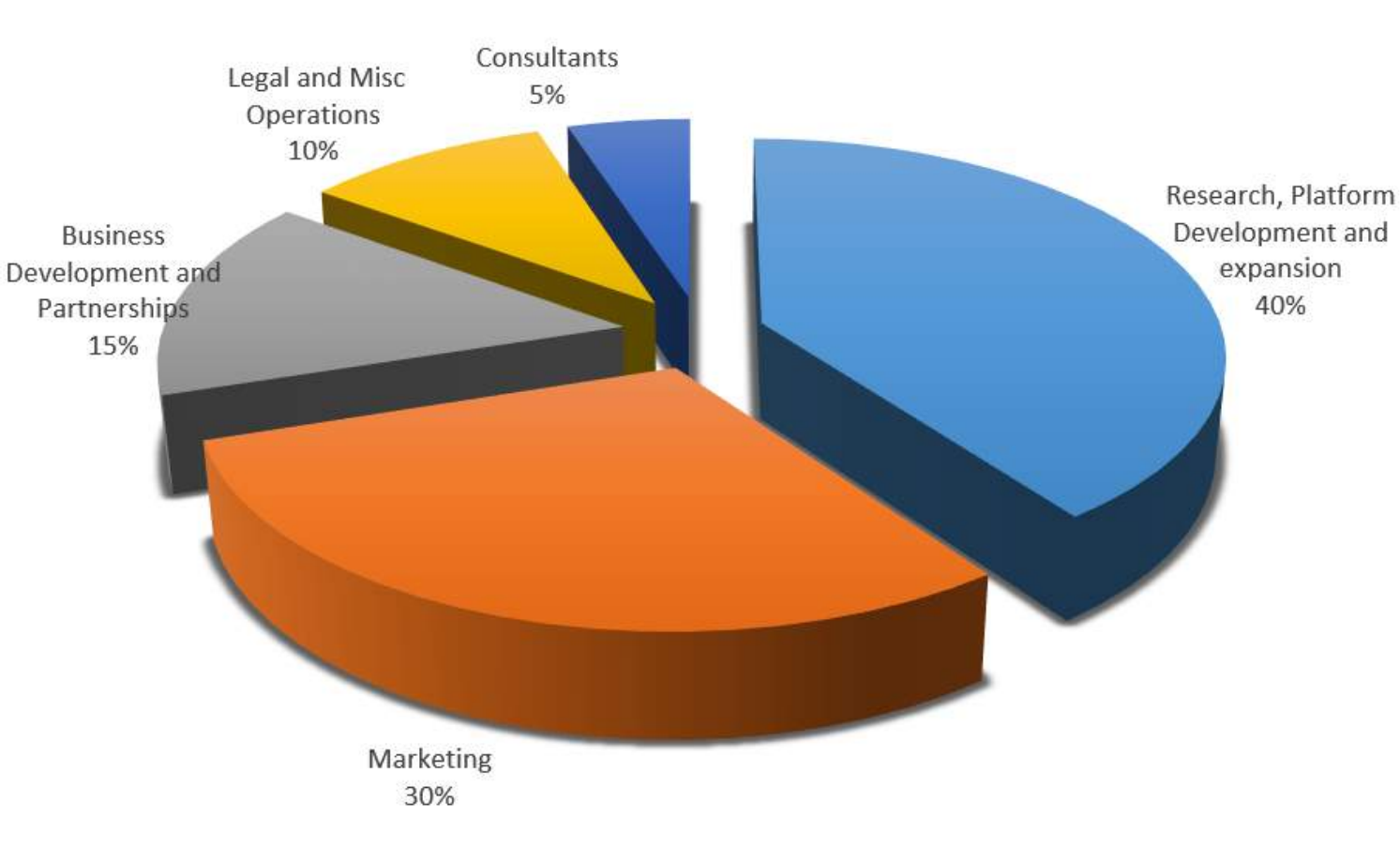
Ticker:	**TDL**
Total supply:	**2,666,666,666**
Base Exchange Rates:	**1 ETH = 7000 TDL Tokens**
Private Round (*):	**70,000,000 TDL (3%)**
Target Amount Offered (ICO):	**59% TDL**

* We will do our best to join Digital Currency Exchanges as soon as possible but in the condition of stability. As you can see our current team is mainly focus on the research and technical part of TuDoLink. We are looking for partner(s) or investor(s) who could in charge of the digital current market and market value management.

4.3 TOKEN DISTRIBUTION



4.4 FUNDS DISTRIBUTION



5. PROJECT TEAM

5.1 RESEARCH & DEVELOPMENT

Laura F. Robles

Assistant Professor of University of Leon
Ph.D. of University of Leon
Ph.D. of University of Groningen
Computer scientist in machine learning, mathematics, artificial intelligence and pattern recognition.

Nicola Strisciuglio

Postdoctoral researcher of University of
Ph.D. of University of Salerno
Computer scientist in distributed system, artificial intelligence, pattern recognition, big data and internet of things. VIPIMAGE's 2015 best paper award.

Jiapan Guo

Postdoctoral researcher of University Medical Center Groningenf
Ph.D. of University of Groningen
Computer scientist in distributed system, depth learning, big data, graphic data field and medical image processing.

Ugo Moschini

Ph.D. of University of Groningen
Computer scientist in distributed system, parallel computing, big data, intelligent system, robotics, neuroscience, pattern analysis and remote sensing image processing.

Estefanía T. Martínez

Ph.D. of University of Groningen
Ph.D. of University of Barcelona
Computer scientist in distributed system,lifelogging, deep learning, artificial intelligence, pattern recognition and big data.

Chenyu Shi

Ph.D. of University of Groningen
Computer scientist in distributed system, blockchain, machine learning, depth learning, pattern recognition.

5.2 CONSULTANTS

Nicolai Petkov

Professor of computer science at the University of Groningen
Head of the system of Intelligent Systems
Author of two monographs and coauthor of another book on parallel computing, holds four patents and has authored over 100 scientific papers.

Peter Van Ooijen

Associate Professor of Medical Imaging Informatics at the University Medical Center Groningen
Discipline Leader Medical Imaging Informatics
Board member of the European Society for Medical Imaging Informatics (EuSoMII)
Working in Medical Imaging Informatics on advanced visualization and processing of imaging, human machine interaction and 3D planning and printing. Author of over 120 international, peer reviewed, publications and over 20 book chapters.

George Azzopardi

Assistant Professor of University of Groningen
Senior AI Specialist at Crowdynews
Affiliated with the University of Malta
Award of the Tenure Track project. The founder of the COSFIRE algorithm in the field of pattern recognition and machine vision.

Zhi Zhang

Founder of cloud poly (Beijing) Technology Co., Ltd. Groningen
The inventor of the core technology of the WPS curve of Chinese characters. He has long been a senior software designer in Microsoft and a technical director of the "Venus program". And lead the development of China Mobile 139 mobile phone mailbox and other star commercial products.

Manuel A.L. Antequera

Ph.D. of University of Groningen
Ph.D. of University of Málaga
Computer scientist in deep learning, robotics, distributed system, parallel computing, big data and pattern recognition.

Xiyuan Hu

Ph.D. of the Institute of automation, Chinese Academy of Sciences
Harvard University medical school, visiting scholar
research field signal adaptive decomposition theory, video and image processing, physiological signal analysis.

5.3 ICO ADVISORS

Will O'Brien

Initial Coin Offering Marketing Advisor
Entrepreneur, Freelance ICO and Blockchain consultant, Community Leader and Cryptocurrency market analyst

Harshit Talavia

Initial Coin Offering Marketing Advisor (India)

Tim Michael Buhr

Initial Coin Offering Marketing Advisor (Germany)

Eddie Damsma

Initial Coin Offering Marketing Advisor (France)

5.4 PUBLIC RELATIONS

Daniel Driessen

Founder of www.blocker.nl
Client at Gemeente Den Haag

Guangfei Zhang

Consultant of PwC
Data analytics
Specialist of biomedical signal processing, data analysis, computer vision and system integration

Angelina Meijlink

Legal Counsel
ING Commercial Banking

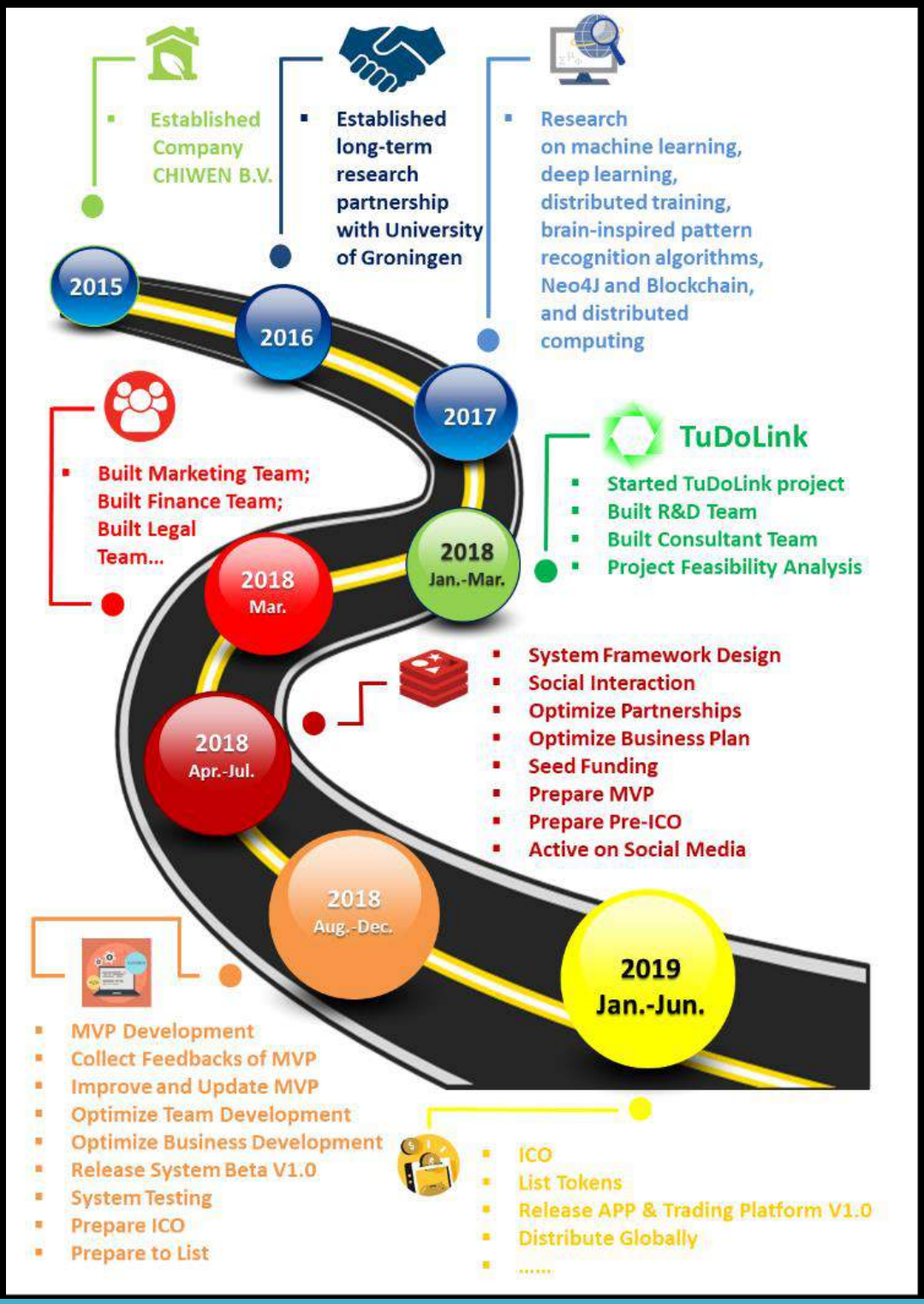
Jing Shao

Promoter of CICPA mutual gold circle at the Southeast University
In charge of Huarun, first brigade and other financial leaders, mainly engaged in blockchain investment, venture capital and equity investment

5.5 FOUNDER


ASTONE (CHENYU) Shi
Ph.D of computer science at the University of Groningen in the Netherlands
Computer scientist and AI specialist in Distributed System, Blockchain, Machine Learning, Pattern Recognition and Big Data
Founder of CHIWEN B.V.
Consultant of IZENE Group
Consultant of IBO Technology

6. PROJECT ROADMAP



7. RISK AND REGULATION

7.1 RISK OF COMPETITION

Similar projects exist in the market currently

7.2 RISK of TOKEN

TuDoLink is not a typical investment platform and cryptocurrency. The purpose of TDL token is to drive users to participate in sharing idle computing resources and data. When compared to other assets (such as stocks, bonds, and other alternative investments), the volatility of digital currency is unstable. We caution over buying tokens that exceed risk tolerance. The advisable way is to diversify the portfolio and make the digital currency a reasonable part of your assets.

Like any other blockchain project, you have to take time to understand our project and vision. The regulatory risk digital currency is seen as a gray zone in the United States and China. The regulatory environment of blockchain and digital currency is still in the primary stage of development. We as TuDoLink will do our best to comply will the development of all laws and regulatory policies, although we cannot foresee how the laws and regulations will affect our projects and the development of our platforms.

In China, TuDoLink will abide by relevant laws and regulations such as finance, securities laws to name just a few. In the occurrence of relevant registration, approval, filing and other procedures, we will strictly follow the procedures to do the necessary. To add on that, TuDoLink will abide by the provisions of the current laws and regulations concerning the restrictions on the sponsors and control of the foreign exchange to the later.

Whenever TuDoLink is developing a blockchain-related business, we will comply with the relevant laws and regulations such as approval, registration, filing and other related procedures.

TuDoLink token refers to other well-known encryption digital currency. Our plan is to set up a non-profit foundation which will operate the token ecosystem in an open, fair and transparent way to support the development team of tokens. The team will choose the registration place according to given legal advice.

The release of TDL is not open to China, the United States and other areas that are permitted by laws.

7.3 REGULATION

The research and development team is a Dutch company that has been truly registered. The company is currently located near the University of Groningen in the Netherlands.

ACKNOWLEDGEMENTS

We would like to thank anyone not directly mentioned in this white paper in supporting and assisting us over all this time. We also want to thank the entire blockchain community for laying the ground base over the past 8 years to make TuDoLink possible.